



2002 Green Zia Company Profile

Sandia National Laboratories Environmental Restoration (ER Project)

Sandia National Laboratories' Environmental Restoration (ER Project) has received Achievement recognition for the 2002 Green Zia Program year. The ER Project is chartered with the assessment and, if necessary, the remediation of inactive waste sites at Sandia National Laboratories. ER's goal is to complete environmental restoration and stabilization efforts and ensure long-term maintenance and monitoring programs by 2006. ER is comprised of 105 staff members, 35 Sandia employees and 70 contractors.

ER participated in the Green Zia program for three main reasons. First, since remedial operations inherently generate waste, it is very important to ensure the waste is reduced or eliminated whenever possible. Waste that is nevertheless generated must then be handled in the most environmentally sound manner possible. Second, ER believes it can achieve environmental excellence and wishes to give all its employees credit through receiving Green Zia recognition. Third, ER finds Green Zia tools very effective for systems analysis, particularly in ensuring continuous environmental improvement.

P2 is strongly incorporated into ER processes. In 1997, SNL/NM conducted Pollution Prevention Opportunity Assessments (PPOA) on two ER projects to investigate ways to



SNL-ER receives 2002 Achievement recognition from Governor Johnson.

minimize the generation of all pollutants (including soil, air and water) and consumption of raw materials, water and energy. The PPOAs were conducted on two specific projects with the understanding the P2 methods could be easily transferred to other projects since most SNL ER sites are similar. Over 20 P2 opportunities were identified and are now being implemented in each project as applicable. Each project lead is familiar with all the P2 methods and routinely includes them in project planning. Project leads are also encouraged to identify and implement new P2 opportunities whenever possible.

ER plans to continue to incorporate Green Zia Program tools in restoration efforts for the life of the project.

Pollution Prevention at Environmental Restoration

Some P2 initiatives that have been successfully implemented at SNL ER include the following:

- Launderable Personal Protective Equipment (PPE) is used instead of disposable PPE.
- A special screening method is used to ensure clean soil can be returned to the site after remediation. Another screening method is used to ensure contaminated soils are properly segregated.
- Metals are recycled when in usable condition.
- Large debris is used to shore up arroyo and landfill edges. When possible, debris is crushed and used for road base.
- A dedicated transport corridor was constructed to eliminate the need for trucks and equipment to be decontaminated.

Successful Approaches for the ER Project



Field personnel at an ER site.



ER staff working in an onsite laboratory. Data is analyzed onsite so immediate decisions can be made.

The most successful approach to P2 in ER comes from management commitment to involve employees, protect and enhance the environment and to continuously improve. Management ensures the culture of employee value and environmental excellence is incorporated into all daily activities through funding and resource allocation, regular meetings and staff interaction, an open-door, supportive policy for employee concerns, and rewarding employees who have good P2 ideas and innovative solutions.

A database was developed to track waste reduction and cost savings

Results

Since 1997, P2 opportunities identified have reduced 600m³ of waste, saving over 1 million dollars. Some examples include the following:

- Site 2*: 253 tons waste avoided
\$154,000 saved
- Site 16: 1,070 tons waste avoided
\$73,000 saved
- Site 228: 2,229 tons waste avoided
\$252,000 saved
- Site 74*: 6,400 tons waste avoided
\$18,000 saved

* site still active

from P2 efforts. This system is currently being upgraded to improve data gathering.

Other planned initiatives include better tracking of new pollution prevention initiatives in the field; enhancing the use of Green Zia planning tools among staff members; increasing purchase of environmentally preferable products; and measuring and reducing energy use.



Top: This is a "before" photo of a remediation and restoration site. Middle: Task Leader Anh Lai and Manager Fran Nimick (right) review plans at an ER site. Bottom: this is an "after" picture of the same site (top photo) after remediation and restoration was completed.

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